



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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In re Patent Application of

Ex Parte: Jörg Lawrenz-Stolz

Application No.: 09/283,169

Filed: April 1, 1999

For: AN ASSEMBLY FOR FOCUSING AND
COUPLING THE RADIATION
PRODUCED BY A SEMICONDUCTOR
LASER INTO OPTICAL FIBERS

Appeal No.: 2001-1295

Administrative Patent Judges:
Thomas, Barrett, and Fleming

**REQUEST FOR REHEARING OF
BOARD DECISION PURSUANT TO
37 C.F.R. 1.197(b)**

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CERTIFICATE OF MAILING

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STALLMAN & POLLOCK LLP

Dated: 01/9/2003

By: Georgia K. Stith

Georgia K. Stith

Sir:

On November 25, 2002, the Board issued a Decision affirming the Examiner's rejection of pending claims 10, 12 and 14 to 21. This request for reconsideration is narrowly focused to one issue raised by the Board that had not been addressed in the briefs. Specifically, the Board stated at page 8:

The language "independent of the holder" in each independent claim on appeal is not specifically taught in any manner in the specification as filed and is not clear from our study of the independent claim on appeal what the language "independent of the holder" actually modifies in the claims.

Support for this limitation had not been questioned during prosecution below and, therefore, was not addressed in the briefs. More importantly, this limitation was added at the beginning of the prosecution of this continuation application and was considered important for

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distinguishing over the art. Failure to give due weight to this limitation was an error and provides grounds for reconsideration.

Appellant will not reiterate the previous arguments and will only comment on the perceived error by the Board.

Support for the Limitation

As the Board correctly noted, the "holder 50" for the optical fibers 21 is shown in Figures 4, 5 and 6 of Appellant's specification. While Figure 4 is the only Figure which shows the single cylindrical focusing lens 60 of the pending claims, the specification makes clear that the structure and placement of the elements in Figures 5 and 6 are also applicable to Figure 4. More specifically, the specification, at page 19, line 16, explains how the fibers 21 of the Figure 4 embodiment are mounted to the holder in the same manner as in Figure 6. (Figure 5 is just a top view of Figure 6). As can be appreciated, the view of Figure 6 would look the same whether there was a single cylinder lens 60 or multiple lenses 22. Figure 5 would only be different to the extent that the lenses 22 would be replaced by a continuous fiber as clearly shown in Figure 4.

As best seen in Figure 5 (and at least indicated by the phantom line of the bottom of the fiber 60 in Figure 4), neither the lenses 21 nor the single optical fiber lens 60 are connected to or supported by the holder 50. Rather, these lenses are located in the space or channel between holder 50 and the laser diode 23. This specific structural arrangement allows the lenses to be mounted and self-centered on the optical fibers 21. More specifically, since the lens 60 is not constrained in fixed position by the holder (as in the prior art), it is free to appropriately align itself with the transport fibers 21.

Summary of Rejection

Put as succinctly as possible, the prior art such as d'Auria (4,147,403) and Comerford (4,079,404) illustrate devices which include a plurality of fibers mounted on a fixture (housing). The fibers collect and transport light. These devices further include a single cylindrical lens (also an optical fiber) which is used to focus light into the transport fibers. In these prior art devices, the lens is supported by the fixture which also supports the transport fibers. Neither reference discloses gluing the lens to the transport fibers.

The Board relies on Daks (4,269,648) for its disclosure of gluing a spherical bead to the end of an optical fiber. The Board holds that one skilled in the art could combine the teaching of Daks with, for example, d'Auria, to render the pending claims obvious.

It was strenuously argued on appeal that the teaching of Daks, which was limited to attaching single microspheres to respective individual fibers, was insufficient to render obvious a claim wherein a single fiber lens was connected to multiple transport fibers. The Board disagreed and Appellant does not challenge that decision in this paper (but reserves the right to so challenge that finding on appeal or through submission of evidence related to secondary considerations should prosecution be continued).

Issue for Reconsideration

Each of the three pending independent claims specify that the cylindrical focusing lens is attached to the optical fibers in a manner to be independent of the holder that supports the optical transport fibers. As noted above, this structural arrangement allows the focusing fiber to be accurately aligned with the transport fibers. This structural arrangement is illustrated in Figures 4 to 6 and is therefore supported by the specification. This claim language sets limits (and therefore "modifies") the geometrical arrangement of the transport fibers, holder and lens.

D'Auria and Commerford only disclose arrangements where the focusing fiber is directly or indirectly supported by the housing. Therefore, even if it would have been obvious that glue could be used to attach the focusing fiber to the array of transport fibers (as shown in d'Auria and Commerford), there is no hint or suggestion in the prior art that the focusing fiber should be arranged to be independent of the holder.

The Board did note that Daks attaches his microspheres to individual fibers in advance of placing the fibers in any holder. The Board then suggests that such a teaching could be extended to an array configuration. However, the Board never considered how that might be accomplished. Specifically, how could one attach an elongated cylindrical lens to an array of fibers in mid-air and maintain that configuration while the glue dried?? In fact, the only way such an assembly could be fabricated is by using a fixture to set up and maintain the spacing and position of the plurality of transport fibers while the glue dried. D'Auria and Comerford teach a

fixture which supports **both** the transport fibers and the focusing lens. **Only Appellant's specification teaches that the focusing fiber should be attached to the transport fibers independent of the holder.**

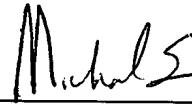
Conclusion

It is respectfully submitted that when the Board reached its decision, it failed to give adequate weight to the limitation that the cylindrical fiber is connected to the transport fibers independent from the holder. This was improper. When the claims are interpreted in light of that limitation, there is no combination of the prior art references that render the claims obvious. Accordingly, Appellant requests that the Board withdraw its decision and find the pending claims to be patentable over the art of record.

Respectfully submitted,

STALLMAN & POLLOCK LLP

Dated: January 9, 2003

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